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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,027

11/06/2008

Jacob M. J. Den Toonder

EPC-018

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25962 7590 12/23/2010
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EXAMINER

MORILLO, JANELLE COMBS

ART UNIT

PAPER NUMBER

1733

NOTIFICATION DATE

DELIVERY MODE

12/23/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@slater-matsil.com

Office Action Summary	Application No. 10/578,027	Applicant(s) DEN TOONDER ET AL.	
	Examiner Janelle Morillo	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>082108.042706</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I in the reply filed on 10/11/2010 is acknowledged. The traversal is on the ground(s) that the 2 groups are linked by a single inventive concept. This is not found persuasive because the inventive feature, thin film of Al and Mg, is known (see below, Kojima in view of "Mechanical Tests of Free-Standing Aluminum Microbeams for MEMS Application" by Zhang).

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima (US 4,906,885) in view of "Mechanical Tests of Free-Standing Aluminum Microbeams for MEMS Application" p 1-11 (hereinafter Zhang).

Kojima teaches an electronic device comprising a thin film aluminum alloy comprising (in wt%) $\leq 3.5\%$ Cu and $\leq 2\%$ Mg (column 5 lines 58-59), which converts to $\leq 1.5\text{at}\%$ Cu and $\leq 2.3\text{at}\%$ Mg, which overlaps the composition in claims 1-7. Kojima teaches an example with 2wt% Cu and 1wt% Mg (0.86at% Cu, 1.1at% Mg), which falls within the boundary of the presently claimed ranges in claims 1-5 and 7. Kojima teaches said thin film exhibits high power

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and long-life characteristics (column 4 lines 6-7), but does not teach the thin film is a free-standing thin film.

However, Zhang teaches Al free standing thin films that are alloyed (specifically with Ti) have much improved properties compared to pure aluminum (p8, 2nd full paragraph, etc.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the aluminum alloyed with Cu and Mg of Kojima into a free standing thin film as taught by Zhang, because Zhang teaches the free standing thin films are in constant motion and require high mechanical properties/are in danger of fatigue (abstract, page 1), and because Kojima teaches said aluminum alloy with Cu and Mg exhibits excellent long life characteristics (see Fig. etc).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 7:30 am- 6:00 pm Mon-Wed.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Roy King/
Supervisory Patent Examiner, Art Unit
1733

/J. M./
Examiner, Art Unit 1733
December 15, 2010